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Arizona Vaccine News

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VACCINE NEWS

Update on Meningococcal B Vaccines

- Between 2008-2013, Arizona averaged 12 cases a year of [invasive meningococcal disease](#), of which 22% were serotype B.
- Two meningococcal B vaccines have been licensed in the United States by the Food and Drug Administration (FDA) for use in people 10-25 years old: Trumenba® (Pfizer) in 2014 and Bexsero® (GSK) in 2015.
- [Trumenba®](#) was first licensed for a three doses series. However, it has [now](#) received a new FDA-approved indication for a two dose schedule, as well as a three dose schedule. The two dose schedule is for dosing at 0 and 6 months, while the three dose schedule is for dosing at 0, 1-2 months, and 6 months.
- The FDA approval for [Bexsero®](#) dosing remains at two doses at 0 and 1 month.

9vHPV Vaccine Receives FDA Approval for Males 9-26 Years Old

- Nine valent Human Papillomavirus vaccine (9vHPV) is now approved by the Food and Drug Administration (FDA) for use in boys and men to prevent anal cancer and genital warts for ages 9-26 years old.
- The current Centers for Disease Control and Prevention (CDC) [recommendations](#) for males are for routine 4vHPV or 9vHPV use in males 9-21 years, and for their use in 22-26 years old who are immunocompromised or who are men who have sex with men. The CDC's Advisory Committee for Immunization Practices ([ACIP](#)) may address this difference at an upcoming ACIP meeting.

For more information on 9vHPV, see the updated [package insert](#).

INFLUENZA AND INFLUENZA VACCINES

Fewer Stillborn Infants if Pregnant Women Receive Influenza Vaccine

- In a study of 5,076 pregnant women, 8.8% had received trivalent influenza vaccine and 377 stillbirths occurred over an 18 month period.
- Stillbirth was 51% less likely among vaccinated versus unvaccinated mothers.
- The largest relative reduction in stillbirths was observed for births occurring just after influenza season suggesting a protective effect against stillbirth from influenza vaccination.

See the abstract in *Clinical Infectious Diseases* (CID), [May 15, 2016](#).

Almost Half of U.S. Infants Now Receiving Seasonal Influenza Vaccine

- Between the 2002-2003 influenza season and the 2011-2012 influenza season in the U.S., full influenza vaccination coverage among children 6 to 23 months increased from 4.8% to 44.7%.
- Hispanic children and non-Hispanic black children had lower full influenza vaccination coverage than non-Hispanic white children.

See the abstract in *Pediatrics*, [March 2016](#).

High-Dose Inactivated Influenza Vaccine Shows Higher Immunogenicity and Effectiveness

- High-dose inactivated split-virus influenza vaccine in patients ≥ 65 years old showed higher immunogenicity and relative efficacy compared with standard-dose inactivated split-virus influenza vaccine, irrespective of type of vaccine used the preceding year.
- The safety profile was also unaffected by previous-year vaccine.

See the article in *CID*, [May 1, 2016](#).

LITERATURE ON VACCINES AND VACCINE-PREVENTABLE DISEASES

Measles and Pertussis Outbreaks More Common where Exemptions and Poor Coverage

- A review of 18 studies showed that out of 970 measles cases with detailed vaccination data, 574 were unvaccinated despite being vaccine eligible, while 405 (70.6%) had exemptions for religious or philosophical reasons.
- In reviewing 32 pertussis outbreaks, the five largest statewide epidemics had 24%-45% unvaccinated or under-vaccinated individuals. However, several pertussis outbreaks also occurred in highly vaccinated populations, consistent with waning immunity.

See the abstract in the *Journal of the American Medical Association*, [March 15, 2016](#).

Protective Effect of Contemporary Pertussis Vaccines

- Pertussis vaccines in the United States (U.S.) are all acellular vaccines (aP). Many places in the world still use whole cell pertussis vaccines (wP).
- All contemporary acellular (aP) and whole cell (wP) pertussis vaccines protect against pertussis disease. However, estimates for short-term protective effect against pertussis in young children were lower for currently available aP vaccines than wP vaccines.

See the article in *CID*, [May 1, 2016](#).

Decrease of HPV Infection in the United States with HPV Vaccine Use

- The presence of quadrivalent vaccine type HPV DNA from cervicovaginal specimens in patients ages 14-34 years old was compared between a prevaccine period (2003-2006) and a four year period while HPV vaccine was being given (2009-2012).
- Between the prevaccine and vaccine eras, the finding of quadrivalent HPV types declined from 11.5% to 4.3% among females aged 14 to 19 years and from 18.5% to 12.1% among females aged 20 to 24 years.
- Women older than 24 years had no decrease in 4vHPV type prevalence.
- There were no statistically significant decreases in non-vaccine HPV types, thus failing to show any evidence of HPV vaccine causing cross-protection for non-vaccine types.

See the abstract in *Pediatrics*, [March 2016](#).

Progress towards Eliminating Hepatitis A in the United States

- After ACIP's recommendation for childhood hepatitis A vaccination in the U.S., the reported number of hepatitis A cases fell from 11.7 cases per 100,000 in 1996 to 0.4 cases per 100,000 in 2011.
- Disparities in hepatitis A virus disease by race/ethnicity and geographic area also dramatically decreased.

See *Morbidity and Mortality Weekly Report*, (MMWR), [February 12, 2016](#) (Supplement 1).

Two Doses of Varicella Vaccine Are More Effective than One Dose

- One dose of varicella vaccine had a vaccine efficacy of 75.6% in preventing any clinically diagnosed varicella, and was 78.1% effective against moderate or severe clinically diagnosed disease.
- Two doses of varicella vaccines was 93.6% effective against any varicella illness, and 97.9% effective against moderate or severe varicella.

See the abstract in *Pediatrics*, [April 2016](#).

Practical Recommendations for Talking to Vaccine Hesitant Patients

- Listen first.
- Beware of debunking myths.
- Use facts sparingly.
- Be careful with fear.
- Understand the importance of your recommendation and example.

See the article with more practical suggestions in *Vaccine*, [April 12, 2016](#).

Adult Vaccination Coverage in the U.S. in 2014

The percentage of adequate vaccine coverage in adults in 2014 is estimated as follows:

- Tetanus, diphtheria, pertussis (Tdap): 20.1%
- Tetanus, diphtheria (Td): 62.2%
- Influenza: 43.2%
- Pneumococcal (high-risk 19-64 years old): 20.3%
- Pneumococcal (≥ 65 years old): 61.3%
- Hepatitis A: 9.0%
- Hepatitis B: 24.5%
- Human papillomavirus (19-26 years old): Female: 40.2%; Male: 8.2%

For more details, see MMWR (SS-01), [February 5, 2016](#).

VACCINE SAFETY

No Increase in Deaths after Vaccination in Children, Adolescents, and Young Adults

- [Vaccine Safety Datalink](#) data was used to evaluate 1,100 deaths in people ages 9 to 26 years between January 1, 2005, and December 31, 2011.
- The risk of death was not increased during the 30 days after vaccination.
- No deaths were found to be causally associated with vaccination.

See the abstract in *Pediatrics*, [March 2016](#).

Two Cases of Vaccine-Derived Polio Infection in an Oncology Ward

- Two children from Middle Eastern countries where vaccination with oral polio vaccine is used had prolonged shedding of vaccine-derived poliovirus (VDPV) while on the same German oncology ward as they were being prepared for a bone marrow transplant.
- Their bone marrow transplants resulted in clearing of their VDPV shedding.
- Although there was no evidence of VDPV transmission to healthcare personnel or to other patients in the hospital, unrecognized stool shedding of VDPV (or wild polio virus) can put healthcare workers and close contacts at risk for infection.

See the letter to the editor in NEJM, [March 31, 2016](#).

RESOURCES

New toolkit to Guide Conversations with Vaccine-hesitant Family and Friends

- “Voices for Vaccines” has released a 17-page illustrated [document](#) titled “Don’t Hesitate: Talking to Your Vaccine-Hesitant Loved Ones with Compassion and Confidence.”

Pneumococcal Vaccination Guidelines

- See the new Arizona Department of Health Services (ADHS) algorithms for [adult](#) recommendations for pneumococcal vaccination.
- Pneumococcal Vaccination Recommendations for [Children and Adults](#) by Age and/or Risk Factor. (Immunization Action Coalition [IAC])
- Recommendations for Pneumococcal Vaccine Use in [Children and Teens](#). (IAC)
- [Standing orders](#) for administering PCV13 and PPSV23 to adults. (IAC)
- Pneumococcal Vaccine Timing for [Adults](#). (CDC)

Vaccinations for Pregnant Women

- The American College of Obstetricians and Gynecologists (ACOG) and IAC have produced a document with recommendations for vaccinations in pregnant women. See the document from [April 2016](#).
- ACOG has released a [Committee Opinion](#) on Integrating Immunizations into Practice.

CDC HPV Cancer Prevention Slide Sets for Provider Presentations

- CDC has HPV Cancer Prevention [slide sets](#) that providers can use to give presentations about HPV and HPV vaccines.
- To get these slide sets, send an email to preteenvaccines@cdc.gov and put “Request HPV Cancer Prevention Slideset.” The Power Point presentations will be emailed to you free of charge.

Preventing Perinatal Hepatitis B Virus Transmission

- New: Labor & Delivery HBsAg Admission Checklist for Birthing Mothers. <http://www.immunize.org/catg.d/p2225.pdf>
- Hepatitis B: What Hospitals Need to Do to Protect Newborns. <http://www.immunize.org/protect-newborns/guide>
- Give Birth to the End of Hepatitis B Campaign. <http://www.immunize.org/protect-newborns/hepB-birth-dose.pdf>
- Handouts for patients and healthcare professionals on Hepatitis B Virus and Vaccine. <http://www.immunize.org/handouts/hepatitis-b-vaccines.asp>

Continuing Education (CE) about Vaccines through Online CDC Self-Study Courses

- [You Call the Shots](#): The CDC sponsors multiple web-based training courses on vaccines including courses that were updated in 2016 on pneumococcal vaccines, meningococcal vaccines, Tdap, DTaP, and hepatitis B vaccine.
- [You are the Key to HPV Cancer Prevention](#): Sponsored by the Postgraduate Institute for Medicine and Area Health Education Centers (CE valid through 12/31/16).

- Please feel free to distribute ADHS' *Arizona Vaccine News* to any of your partners who may be interested. If you wish to unsubscribe, email karen.lewis@azdhs.gov.
- Past issues of *Arizona Vaccine News* and the Arizona Immunization Program Office's *Immunications* newsletter are found at <http://www.azdhs.gov/phs/immun/vacNews.htm>.